

REMARKS

Claims 1-36 are currently pending. Claims 1, 3, 5, and 7 have been amended to better clarify what Applicants believe to be the invention. Support for the amendments can be found in original claims 1, 3, 5 and 7 and in the specification on page 24, lines 30-32, continuing onto page 25, lines 1-6. No issue of new matter is believed to be introduced by this amendment. Accordingly, claims 1-36 are currently under consideration.

In the Requirement for Restriction, the Examiner requested election of one of the following groups:

Group I. Claims 1-4, drawn to polynucleotides encoding peptides of 21-40 amino acids and comprising a ZA loop.

Group II. Claims 5-8, drawn to peptides of 21-40 amino acids and comprising a ZA loop.

Group III. Claims 9-10, drawn to antibodies to the peptides of Group II above.

Group IV. Claims 11, 12, 14, 15, 25, 26, and 28, drawn to methods of identifying promoters of a bromodomain (including P/CAF) binding to a protein (including Tat with an acetylated Lysine at position 50 of SEQ ID NO:45).

Group V. Claims 11, 13, 14, 15, 25, 27, and 28, drawn to methods of identifying inhibitors of a bromodomain (including P/CAF) binding to a protein (including Tat with an acetylated Lysine at position 50 of SEQ ID NO:45).

Group VI. Claims 16, 17, 19, 20, 30, 31, and 33, drawn to methods of identifying stabilizers of a bromodomain-ligand binding complex (including a P/CAF-Tat complex wherein the Tat has an acetylated Lysine at position 50 of SEQ ID NO: 45).

Group VII. Claims 16, 18, 19, 20, 30, 32, and 33, drawn to methods of identifying inhibitors of a bromodomain-ligand binding complex (including a P/CAF-Tat complex

wherein the Tat has an acetylated Lysine at position 50 of SEQ ID NO: 45) by measuring stability of the complex in the presence of the agent.

Group VIII. Claims 21-22, drawn to methods of identifying binding partners for a protein comprising an acetyl-lysine.

Group IX. Claim 23, drawn to agents that inhibit binding of bromodomains with a protein, said agent selected from SEQ ID NO: 4, 5, or 6.

Group X. Claim 24, drawn to a computer with a representation of a Tat-P/CAF complex.

Group XI. Claims 29, and 35 drawn to promoters of P/CAF binding to Tat.

Group XII. Claims 29, 35, and 36, drawn to inhibitors of P/CAF binding to Tat.

Group XIII. Claims 34, and 35, drawn to compounds that stabilize the complex of Tat and P/CAF.

Group XIV. Claims 34, 35 and 36, drawn to compounds that destabilize the complex of Tat and P/CAF.

For Group I above, the Examiner has noted that restriction to one of the following is also required under 35 USC 121. Therefore, election is required of one of Groups I-XIV, and, if Group I is elected, then election is also required to one of subgroups A, B, or C. The inventions of these subgroups represent the invention of the elected Group wherein:

- A) the peptide comprises an amino acid sequence of SEQ ID NO: 3
- B) the peptide comprises an amino acid sequence of SEQ ID NO: 48, or
- C) the peptide comprises one of the sequences of SEQ ID Nos: 7-42

For Groups II and III above, the Examiner has noted that restriction to one of the following is also required under 35 USC 121. Therefore, election is required of one of Groups I-XIV, and, if one of Groups II or III is elected, then election is also required to one of subgroups A or C, as described above with reference to Group I.

For Groups IV-VII above, the Examiner has noted that restriction to one of the following is also required under 35 USC 121. Therefore, election is required of one of Groups I-XIV, and, if one of Groups IV-VII is elected, then election is also required to one of subgroups D or E. Subgroups D or E represent the elected method, wherein:

D) the compound being tested is selected using rational drug design from the information of Tables 1-6; or

E) the compound being tested is selected using rational drug design based on the coordinates of the three-dimensional structure of a bromodomain consisting of SEQ ID NO: 7.

For Group VIII above, the Examiner has noted that restriction to one of the following is also required under 35 USC 121. Therefore, election is required of one of Groups I-XIV, and, if Group VIII is elected, then election is also required to one of subgroups in subgroup C above.

For Group IX above, the Examiner has noted that restriction to one of the following is also required under 35 USC 121. Therefore, election is required of one of Groups I-XIV, and, if Group IX is elected, then election is also required to one of subgroups F-H. Subgroups F-H represent the elected invention wherein the agent inhibits the binding between a bromodomain and peptides comprising the sequence of:

F) SEQ ID NO: 4;

G) SEQ ID NO: 5; or

H) SEQ ID NO: 6.

Responsive to the Requirement for Restriction, Applicants elect to prosecute the invention of Group II, claims 5-8, drawn to peptides of 21-40 amino acids and

comprising a ZA loop, with traverse. Furthermore, Applicants elect to prosecute the sequence of SEQ ID NO: 3, as related to these claims, without traverse.

Applicants respectfully request reconsideration of the Requirement for Restriction, for the reasons provided as follows.

Under 35 U.S.C. §121 "two or more independent and distinct inventions ... in one Application may ... be restricted to one of the inventions." Inventions are "'independent'" if "there is no disclosed relationship between the two or more subjects disclosed" (MPEP 802.01). The term "'distinct'" means that "two or more subjects as disclosed are related ... but are capable of separate manufacture, use or sale as claimed, AND ARE PATENTABLE OVER EACH OTHER" (MPEP 802.01) (emphasis in original). However, even with patentably distinct inventions, restriction is not required unless one of the following reasons appear (MPEP 808.02):

1. Separate classification
2. Separate status in the art; or
3. Different field of search.

Further, under Patent Office Examining Procedures, "[i]f the Search and Examination of an entire Application can be made without serious burden, the Examiner must examine it on the merits, even though it includes claims to distinct or independent inventions" (MPEP 803, Rev. 8, May 1988) (emphasis added).

Applicants respectfully submit that the groups designated by the Examiner fail to define compositions and methods, with properties so distinct as to warrant separate Examination and Search. Claims 5-8, of Group II, as amended, which relate to a peptide comprising a ZA loop of a bromodomain, said bromodomain having between about 21 to 40 amino acids, and wherein said bromodomain comprises the amino acid sequence of SEQ ID NO: 3 are fundamentally related to claims 1-4 of Group I, drawn to an isolated nucleic acid encoding a peptide comprising a ZA loop of a bromodomain, said bromodomain having between about 21 to 40 amino acids, and wherein said bromodomain comprises the amino acid sequence of SEQ ID NO:3 and/or SEQ ID NO:48. In particular, the peptides of claims 5-8 are in fact encoded by the nucleic acids encompassed in claims 1-4 of Group I. Thus, a search on the claims elected by way of the response to the restriction requirement would require a search on the peptides of

Group II, and more particularly the peptide of SEQ ID NO: 3, which is encoded by the nucleic acids encompassed in claims 1-4 of Group I. Applicants assert that the search for the peptide separately classified by the Examiner as the invention of Group II would result in identification of the nucleic acids of Group I that encode this peptide.

Furthermore, given the fact that Applicants have elected to prosecute SEQ ID NO: 3 as related to claims 5-8, without traverse, Applicants believe that it would not pose an undue burden on the Examiner to search the known databases for the nucleic acid sequence that may encode SEQ ID NO: 3.

The Examiner's assertions to the contrary notwithstanding, Applicants respectfully submit that a search and examination on the merits of at least Group II and Group I claims can be made without serious burden. Thus, conjoint examination and inclusion of the claims of Groups II and I of the present Application would not present an undue burden on the Examiner, and accordingly, withdrawal of the Requirement for Restriction, or, at the least, modification to include the claims drawn to Group II and Group I is in order as related to SEQ ID NO: 3.

Fees

No fees are believe to be necessitated by the foregoing response. However, if this is in error, authorization is hereby given to charge Deposit Account No. 11-1153 for any underpayment, or credit any overages.

Conclusions

In view of the above, withdrawal of the Requirement for the Restriction is requested, and an early action on the merits of the claims is courteously solicited.

Respectfully submitted,



Veronica Mallon, Ph.D.
Agent for Applicant(s)
Registration No. 52,491

KLAUBER & JACKSON
411 Hackensack Avenue
Hackensack, NJ 07601
(201) 487-5800